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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/676,216	10/01/2003	Kay Leong Lim	AMT00-002CIP	9687

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George O. Saile
28 Davis Avenue
Poughkeepsie, NY 12603

EXAMINER

KASTLER, SCOTT R

ART UNIT	PAPER NUMBER
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1742

DATE MAILED: 09/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/676,216

Applicant(s)

LIM ET AL.

Examiner

Scott Kastler

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 June 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 3-5 and 10-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 3-5 and 10-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 4/17/06.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application
- ☐ Other: _____.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 3-5 and 10-14 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-11 and 19-22 of U.S. Patent No. 6,461,563.

Although the conflicting claims are not identical, they are not patentably distinct from each other because the pending claims are encompassed by the granted claims.

Claims 3-5 and 10-14 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-6 of U.S. Patent No. 6,660,225. Although the conflicting claims are not identical, they are not patentably distinct from each other because the pending claims are encompassed by the granted claims.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Seyama et al in view of Hiraoka et al. Seyama et al discloses the invention substantially as claimed. Seyama et al discloses a method of forming a sintered article comprising:

Forming a first mixture comprising a first metal powder and a binder;

Forming a green body by compression molding said first mixture;

Forming a second mixture comprising a second metal powder and a binder; and

Providing said green body to a mold;

Injection molding said second mixture into said mold; and

Sintering said mixtures to form a sintered article.

The Examiner finds that any combination of different materials meets the limitation of instant claim 4.

However, Seyama et al does not disclose wherein a lubricant is added to said mixtures, but only discloses addition of binder, plasticizer and solvent.

It is common knowledge in the prior art to add lubricant to formed sinterable mixtures in order to reduce die and injection molding equipment wear.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to add lubricant to the mixtures of Seyama et al in order to decrease forming equipment wear.

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Seyama et al also does not disclose wherein the binder and material composition and amounts are selected so as to control shrinkage so that an outer component is aided in joining to an inner component.

Hiraoka et al teaches that when composite components are formed of separate sinterable mixtures, one of ordinary skill in the art can select a greater amount of shrinkage of an outer component in order to assist in bonding. Hiraoka et al further teaches shrinkage amounts that closely approximate those as claimed by Applicant, thereby establishing a *prima facie* case of obviousness.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to consider shrinkage amounts in the invention of Seyama et al when the geometry forms a joined composite in order to increase the strength of the joined bond.

Claims 10-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bieberich in view of Seyama et al and Hiraoka et al. Bieberich discloses the invention substantially as claimed. Bieberich discloses a method of forming a wire die comprising:

Providing a composite wire die structure formed of at least two sinterable mixtures; and

Sintering said at least two sinterable mixtures to form a wire die.

However, Bieberich does not disclose the method as claimed, but provides for sinter bonding of mixtures.

Seyama et al in view of Hiraoka et al as applied to claims 3-5 above, discloses a method of forming a sintered composite body of the claimed method in the same field of endeavor, powder

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metallurgy, for the purpose of increasing the bond between the separate mixtures of the composite.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the invention of Seyama et al in view of Hiraoka et al in the invention of Bieberich in order to form a wear die of improved composite strength.

Response to Arguments

Applicant's arguments filed on 6/16/2006 have been fully considered but they are not persuasive. Applicant's argument that US'563 does not read on instant claims 3-5 because instant claims 3-5 can employ more than 2 mixtures and US'563 is limited to no more than 2 mixtures is not persuasive because firstly, the instant claims also read on the use of only 2 mixtures, and secondly, US'563 is not limited to the use of only 2 mixtures.

Applicant's argument that since claims 19-22 of US'563 are limited to differential shrinkages of 1% or less is not persuasive because claim 9 or example, is not so limited (and in fact recites a differential shrinkage of 10%).

Applicant's further argument that pending claims 10-14 teach a differential shrinkage of 1 % or less is firstly directly contradicted by Applicant's previous argument that pending claim 10 recites a differential shrinkage of at least 10% (see applicants arguments page 6) and secondly as stated by Applicant claims 19-22 of US'563 teach a differential shrinkage of 1% or less.

Applicant's further argument that the limitations of specific shapes of the feedstocks or property variations are not specifically given in the granted claims of US'563 are also not persuasive because these embodiments are also covered by the granted claims of US'563.

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Applicant's argument that a double patenting rejection over US'225 is not proper because a restriction was made is not persuasive because the instant claims are for the same elected invention as that of US'225 and therefore an obviousness type double patenting rejection is proper.

Applicant's argument that Seyama et al does not disclose a step of providing a group of mixtures of powdered materials where each member of the group has a functional property that is different from any functional property possessed by any other member of the group is not persuasive because clearly, if this were not the case, i.e. if each member did not have at least one property different from any other member of the group, then each member of the group would be identical and therefore the group would not be a mixture of materials, but would be all of the same material. Therefore as clearly stated in the above rejection, any mixture of materials meets this limitation.

Finally,. Applicant's argument that Seyama et al does not include the use of a third feedstock material required by instant claim 10 is not persuasive at least because Seyama et al in the claims for example, specifically recites embodiments employing a third feedstock.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after


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the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Scott Kastler whose telephone number is (571) 272-1243. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on (571) 272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Scott Kastler
Primary Examiner
Art Unit 1742

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